

RA4M3 Group

Evaluation Kit for RA4M3 Microcontroller Group
EK-RA4M3 v1
Errata

Renesas RA Family
RA4 Series

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(Rev.4.0-1 November 2017)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
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www.renesas.com

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Precautions

This Evaluation Kit is only intended for use in a laboratory environment under ambient temperature and humidity conditions. A safe separation distance should be used between this and any sensitive equipment. Its use outside the laboratory, classroom, study area, or similar such area invalidates conformity with the protection requirements of the Electromagnetic Compatibility Directive and could lead to prosecution.

The product generates, uses, and can radiate radio frequency energy and may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off or on, you are encouraged to try to correct the interference by one or more of the following measures:

- Ensure attached cables do not lie across the equipment.
- Reorient the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Power down the equipment when not in use.
- Consult the dealer or an experienced radio/TV technician for help.

Note: It is recommended that wherever possible shielded interface cables are used.

The product is potentially susceptible to certain EMC phenomena. To mitigate against them it is recommended that the following measures be undertaken:

- The user is advised that mobile phones should not be used within 10 m of the product when in use.
- The user is advised to take ESD precautions when handling the equipment.

The Evaluation Kit does not represent an ideal reference design for an end product and does not fulfill the regulatory standards for an end product.

Renesas RA Family

EK-RA4M3 v1

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This Errata describes the known issues and exceptions to the functional specifications for the EK-RA4M3 v1, Evaluation Kit for the RA4M3 MCU Group. For additional information on the kit, see the EK-RA4M3 v1 user's manual.

According to the following section in the *RA4M3 Hardware User's Manual*, r01uh0893ej0120-ra4m3.pdf; **26.3.1.4 USB 2.0 Full-Speed Module (USBFS): Example external connection circuits**, the series resistors R21 and R22 in the USB FS interface should have a value of 27 Ω . On affected boards, R21 and R22 are fitted with 33 Ω resistors. The EK-RA4M3 v1 schematic reflects these incorrect values as can be seen in Figure 1.

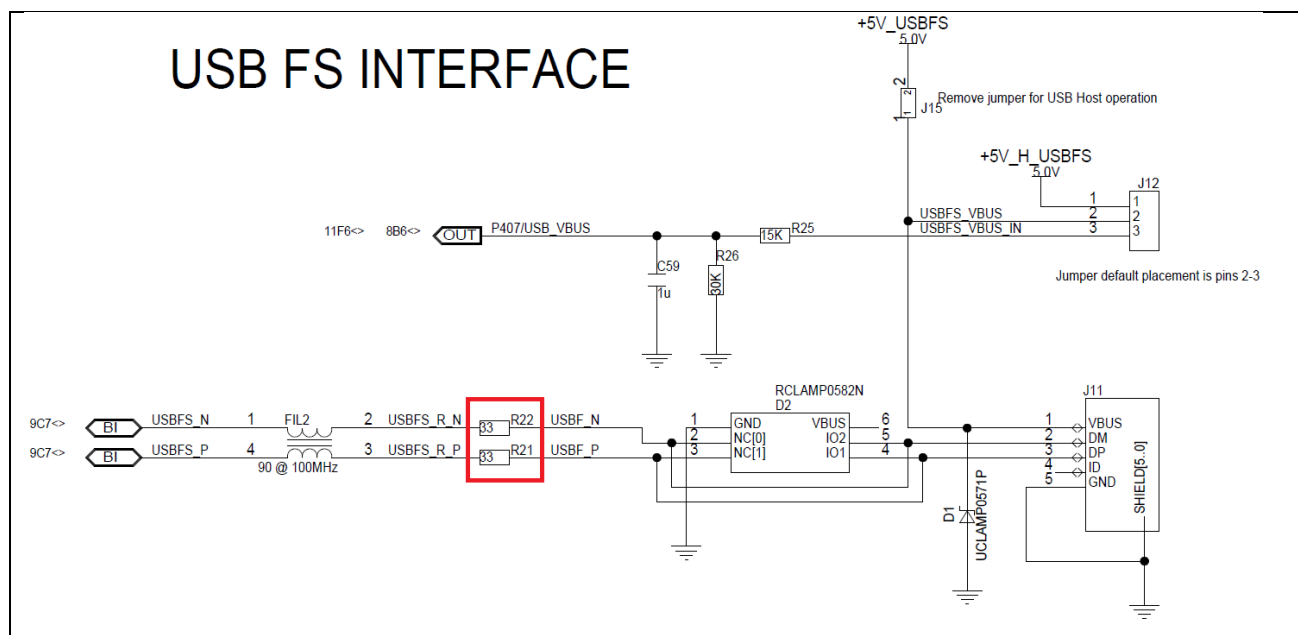


Figure 1. USB FS Series Resistors R21, R22

This kit has been confirmed to work with 33 Ω resistors so there is no need to replace them with 27 Ω resistors.

However, in your circuit design, be sure to insert a 27 Ω resistor into the USB differential line to satisfy the characteristics of the USB module.

None. The resistors R21 and R22 have the correct value of 27 Ω on later builds of the board. The schematic has been updated to show the corrected values.

```
Version          : 1
Serial number    : 219243 to 219542
```

2.2 MCU Pin Header J4 Silkscreen

Description

The MCU Pin Header J4 has an incorrect label for pin 17. This is identified as P213 when it should be P214. The schematic is correct.

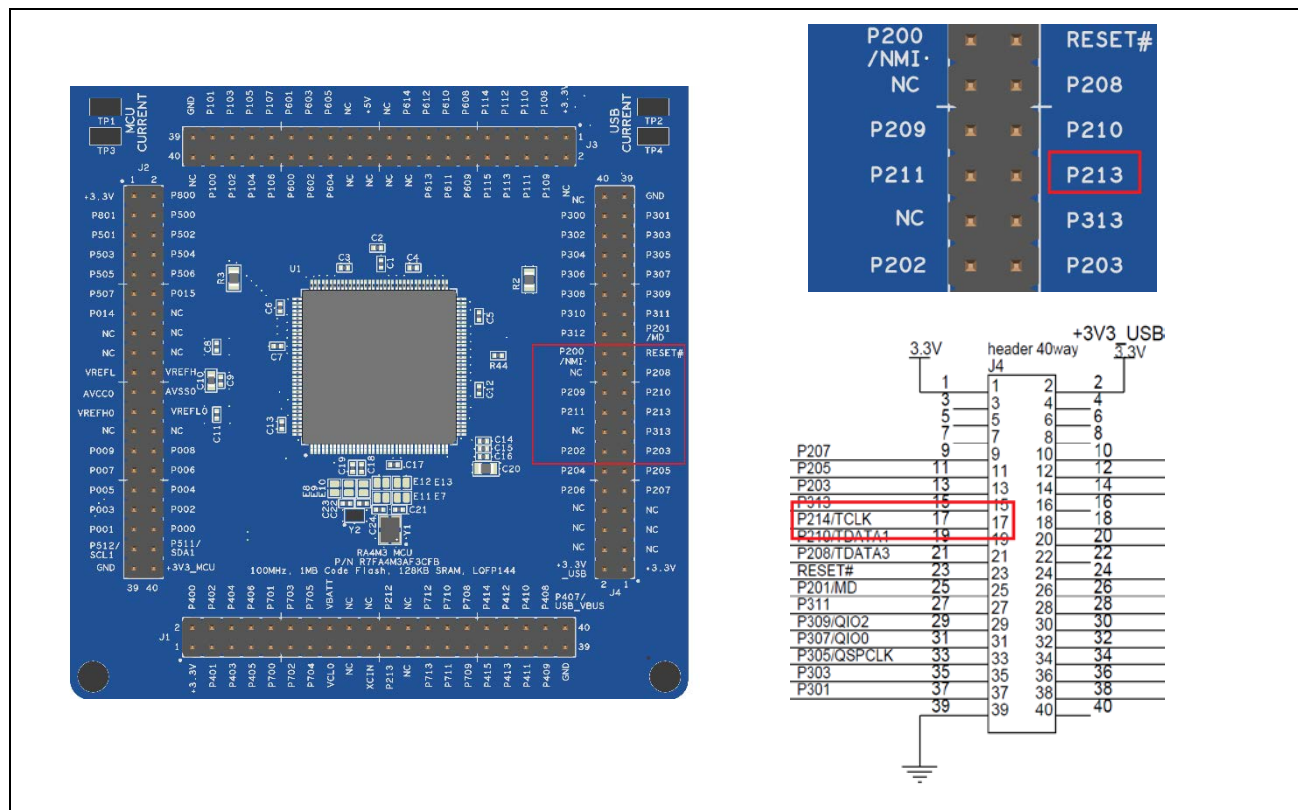


Figure 2. MCU Pin Header J4 Pin17 Label Error

2.2.1 Corrective Action

None. The silkscreen has been corrected to show the correct pin identification on later builds of the board.

2.2.2 Kits Affected

Version : 1
Serial number : 219243 to 219542

2.3 MCU Unique ID

Description

The Flash memory register UIDRn is a read-only register that stores a 16-byte ID code (Unique ID, UID) for identifying the individual MCU.

In certain cases, the Quick Start Software programmed into the board may incorrectly display the device UID.

The UID is displayed in 'Kit Information' as a series of 4-byte values *bbbb-bbbb-bbbb-bbbb* as can be seen in the following example. If any single byte is of the form '0000nnnn', that is, has a leading zero, it will not be displayed.

```

1. KIT INFORMATION
a) Kit name: EK-RA4M3
b) Kit ordering part number: RTK7EKA4M3S00001BE
c) RA Device part number: R7FA4M3AF3CFB
d) RA MCU 128-bit Unique ID (hex): 35820520-32313057-364eea4f-7d274b4e
e) RA MCU Die temperature (F/C): 71.09/21.61
f) Blue LED blinking frequency (Hz): 1
g) Blue LED blinking intensity (%): 10
> Press space bar to return to Menu

```

Figure 3. MCU UID Leading Zero Not Displayed

2.3.1 Corrective Action

The Quick Start Software programmed into later boards has been updated to show the correct device UID. The latest sample software can be downloaded from;

https://github.com/renesas-ra-fsp-examples/tree/master/example_projects

2.3.2 Kits Affected

Version : 1
Serial number : 213857 to 213946, 216622 to 216942

3. Appendix – Kit Identification

3.1 Kit Version

The kit version can be found on the EK-RA4M3 kit packaging and EK-RA4M3 board as described in this section. The kit version is the last digit in the orderable part number as shown in the second box in Figure 4. In the example below, the kit version number is “1” as shown in both Figure 4 and Figure 5.

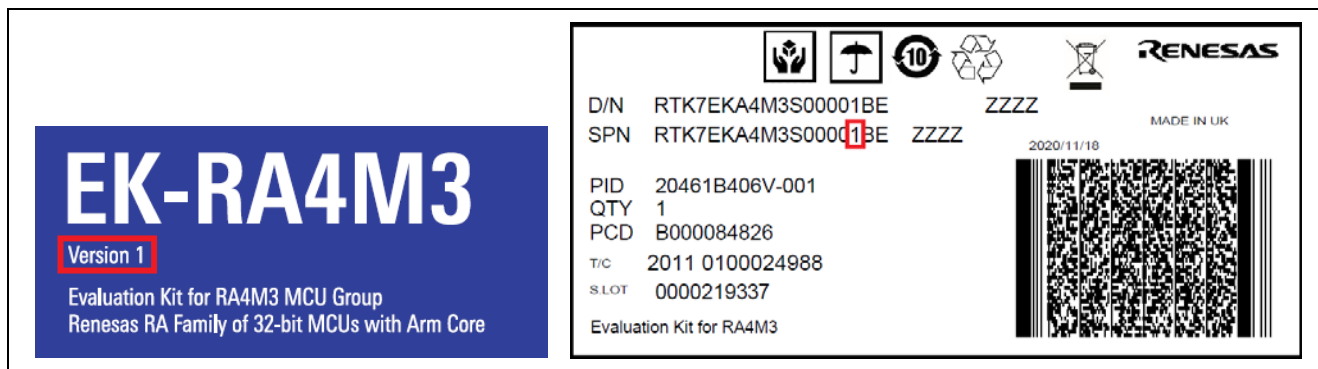


Figure 4. Identification of the Kit Version Number on the EK-RA4M3 Kit Packaging



Figure 5. Identification of the Kit Version Number on the EK-RA4M3 Board

3.2 Serial Number

In addition to the kit version number, the kit serial number is used to uniquely identify a kit.

The serial number is located on the packaging label identified as S.LOT and on the bar code sticker on the back/bottom side of EK-RA4M3 board. In the example in Figure 6 and Figure 7, the serial number is “219337.”

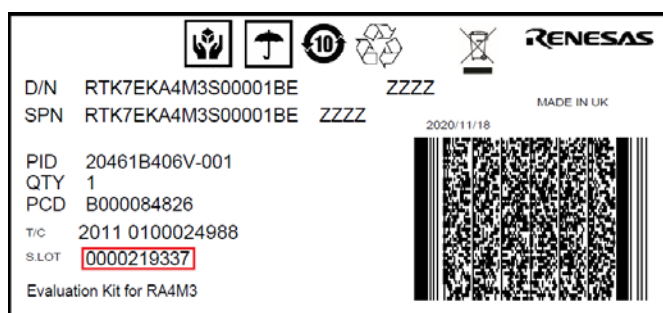


Figure 6. Identification of the Serial Number on the EK-RA4M3 Kit Packaging



Figure 7. Identification of the Serial Number on the EK-RA4M3 Board

4. Website and Support

Visit the following URLs to learn about the kit and the RA family of microcontrollers, download tools and documentation, and get support.

EK-RA4M3 Resources	renesas.com/ra/ek-ra4m3
RA Product Information	renesas.com/ra
RA Product Support Forum	renesas.com/ra/forum
Renesas Support	renesas.com/support

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jan.12.21	—	Initial release

EK-RA4M3 v1 – Errata

Publication Date: Jan.12.21

Published by: Renesas Electronics Corporation

EK-RA4M3 v1 – Errata